

Phidia-c

Compact Ti: Sapphire Ultrafast Laser Amplifier



FEATURES

- Most Compact Single-box amplifier in the world
- Industrial grade femto-second Ti:Sapphire laser
- Field-proven pump laser modules
- High reliability and stability temperature controlled enclosure
- Super beam quality and pointing
- Series with operating repetition of 1KHz, 10KHz, and 50KHz
- Build-in burst mode
- Optional 2nd and 3rd harmonics generation

Phidia-c is the most compact one-box Ti:Sapphire ultrafast amplifier in the market. In one single enclosure, an optional all-PM fiber oscillator, a pump laser and amplifiers are integrated together. It features industrial-grade, maintenance-free PM-fiber oscillator as a seeder as well as field-proven Q-switch pump lasers, resulting in excellent reliability for day-to-day operations.

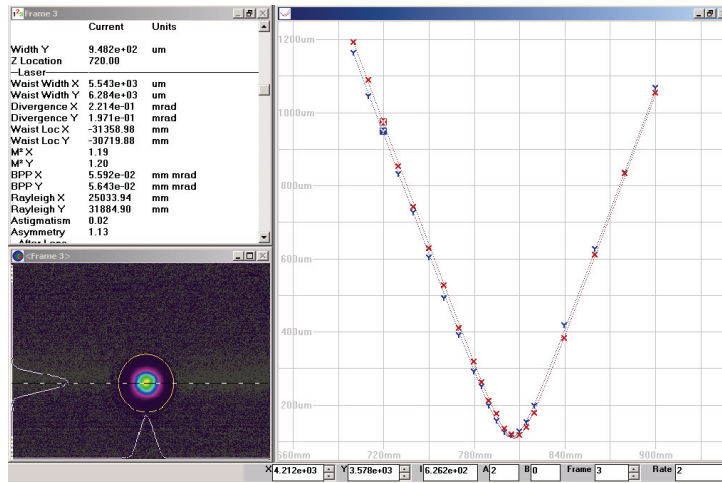
Phidia-c is capable of operating at variable repetition-rates of 1KHz, 10KHz and 50 KHz and delivers pulse duration of <120fs with output power up to 3.5 W. Phidia-c is a robust, high reliable ultrafast amplifier offering the widest range of operation repetition-rate. It is an ideal ultrafast tool for industrial application as well as scientific research, such as material processing, micromachining, ultrafast spectroscopy, etc.

- Phidia-c-1 series offer up to 3.5W output, capable of operating up to 3KHz repetition rate
- Phidia-c-10 series are pumped by a field-proven Nd:YAG laser delivering up to 2 W output up to 10 KHz operating repetition rate
- Phidia-c-50 series are capable of operating at 20-50 KHz with output up to 1.5 W

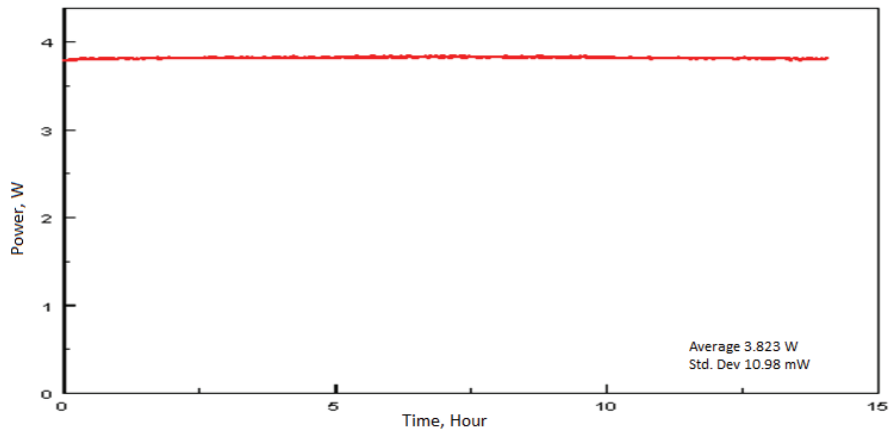
APPLICATIONS

- Ultrafast industrial application
- Precision micromachining
- Material processing
- Pump-probe analysis
- Pump OPA
- THz generation

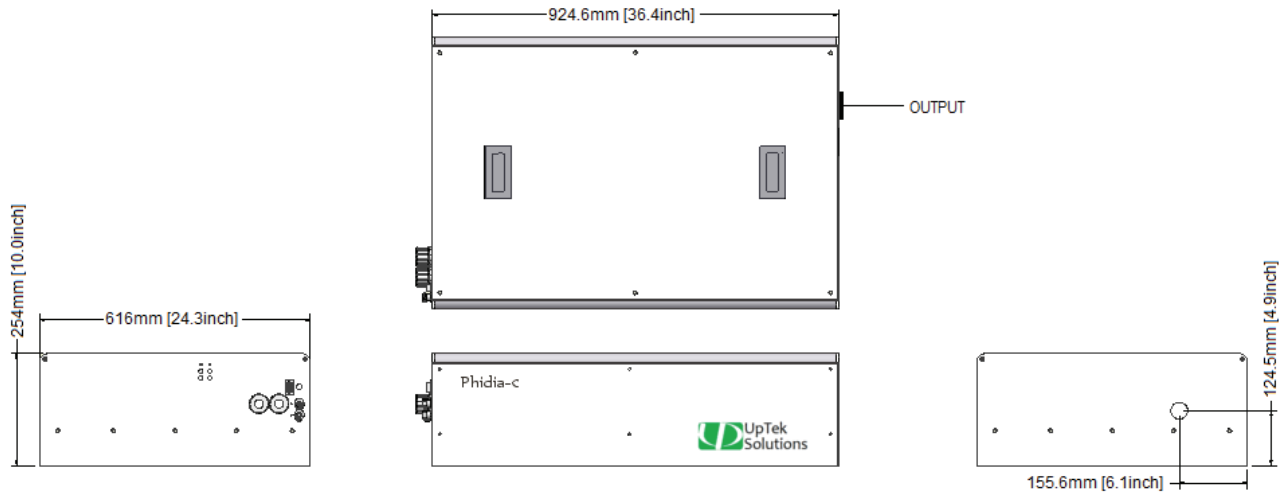
	Phidia-c-1	Phidia-c-10	Phidia-c-50
Pulse Width (FWHM)	< 120 fs	<120 fs	<120fs
Output Power	>3.5 W	>2.0 W	>1.5 W
Repetition Rate	Up to 3 KHz	Up to 10 KHz	Up to 50 KHz
Center Wavelength	790 ± 10 nm	790 ± 10 nm	790 ± 10 nm
Spatial Mode	M ² <1.3 (TEM ₀₀)	M ² <1.3 (TEM ₀₀)	M ² <1.4 (TEM ₀₀)
Energy Stability	<0.5% RMS	<0.75% RMS	<0.75% RMS
Contrast Ratio	>1000:1 pre pulse >150:1 post pulse	>1000:1 pre pulse >150:1 post pulse	>1000:1 pre pulse >100:1 post pulse
Beam Pointing Stability	<10 μrad/°C	<20 μrad/°C	<20 μrad/°C
Beam Size (1/e ²)	~6 mm	~5 mm	~ 5 mm
Polarization	Linear, Horizontal	Linear, Horizontal	Linear, Horizontal



Phidia-c-1 Output Beam Quality Measurement



Long-term Stability Measurement (~0.3% RMS)



Phidia-c Series Footprint